

REC'D
5.3.12
P.B.

May 1, 2012

Office of Water Resources
Freshwater Wetlands Program
Rhode Island Department of Environmental Management
235 Promenade Street, Room 260
Providence, RI 02908-5767

Subject: *Request for Preliminary Determination*
Proposed Fence Installation, Building Demolition and Debris Removal Project,
BASF, 167 & 180 Mill Street, Cranston, Rhode Island

Dear Reviewer,

On behalf of BASF, AECOM Inc. (AECOM) is submitting the enclosed *Request for Preliminary Determination* for the proposed installation of a perimeter fence (to include the cutting of vegetation), demolition of existing structures, and debris removal at several former manufacturing facilities located at 167 Mill Street (a/k/a 0 Mill Street according to the Cranston Assessor's office) and 180 Mill Street in Cranston, Rhode Island.

Although a majority of the proposed activities are to be located upland of the 50-foot *Perimeter Wetland* adjacent to Bellefont Pond and outside of the 200-foot *Riverbank* on the 180 Mill Street property, there will be temporary impacts to Freshwater Wetlands at the project sites. These impacts are associated with the removal of an old fire intake structure located along the bank of Bellefont pond, the removal of an existing concrete structure and debris partially located within the 50-foot *Perimeter Wetland*, and the installation of a single fence post that is to be driven into the bottom of Bellefont Pond.

The enclosed application and materials detail the proposed activities in accordance with the requirements of Rule 9.00 of the Rhode Island Department of Environmental Management (RIDEM) *Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act*. A project narrative describing proposed activities, a site locus map, a site plan, and wetland edge delineation forms are enclosed for your review. AECOM has provided four copies of the application package and the required Request for Preliminary Determination fee with this filing.

To enhance and sustain the world's built, natural and social environments



Request for Preliminary Determination (Rule 9.00)

Rhode Island Department of Environmental Management

Debris Removal and Fence Installation Project Cranston, Rhode Island BASF



Request for Preliminary Determination
(Rule 9.00)
Rhode Island Department of
Environmental Management

Debris Removal and
Fence Installation Project
Cranston, Rhode Island
BASF



Prepared By Thomas J. Keough
Environmental Scientist



Reviewed By Joanne M. Lynch, P.Eng.
Project Manager

Contents

1.0 Introduction	1-1
1.1 Project Background and Overview	1-1
1.2 Purpose and Need	1-2
1.3 Regulatory Framework.....	1-2
2.0 Existing Conditions	2-1
2.1 Land	2-1
2.2 Freshwater Wetlands	2-1
3.0 Project Description	3-1
3.1 Construction Sequencing.....	3-1
3.2 Access, Staging and Site Preparation	3-1
3.3 Sedimentation and Erosion Control	3-1
3.4 Construction Activities	3-1
4.0 Demonstration of Insignificant Alteration	4-1
4.1 Rule 9.02 (A) - Project Scope	4-1
4.2 Rule 9.02 (B) - General Requirements	4-1
4.3 Rule 9.02 (C) - Project Description	4-1
4.4 Rule 9.02 (D) - Avoidance and Minimization	4-1
4.4.1 Project Avoidance	4-1
4.4.2 Project Minimization	4-2
4.5 Rule 9.02 (E) - Engineering Requirements	4-4
4.6 Rule 9.02 (F) - Compliance with Water Quality Regulations	4-5
5.0 Summary.....	5-1

List of Appendices

Appendix A Figures

Appendix B Site Photographs

Appendix C Permit Site Plan

Appendix D Wetland Edge Delineation Data Forms

List of Figures

Figure 1 USGS Locus Map

Figure 2 Aerial Photograph

Figure 3 FEMA Map

General Application Form

**RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES/FRESHWATER WETLANDS PROGRAM**

235 Promenade Street, Providence, RI 02908
Telephone: 401-222-6820, Telecommunication Device for the Deaf: 401-222-4462

GENERAL APPLICATION FORM

Please type or print

PART A	Purpose of Application:
<input type="checkbox"/> Request to Determine Presence of Wetlands only (Rule 8.02)	
<input type="checkbox"/> Request to Verify Delineated Edge of Wetlands (Rule 8.03)	
<input checked="" type="checkbox"/> Request for Preliminary Determination (Rule 9.00)	
<input type="checkbox"/> Application to Alter a Freshwater Wetland (Rule 10.00)	
<input type="checkbox"/> Application For Renewal (Rule 11.02) Complete Only Parts B,D & H	
<input type="checkbox"/> Application for Permit Modification (Rule 11.03)	
<input type="checkbox"/> Application For Permit Transfer (Rule 11.04) Complete Only Parts B, E & H	
<input type="checkbox"/> Change in Owner during review – (Rule 7.02(E)) Cmpl. Only Parts B, F & H	

AGENCY USE ONLY Application No.:
AGENCY USE ONLY Application Received:

PART B	Applicant Information:		
• Name of Applicant (see Rules 7.02): <u>BASF, c/o Dr. Joseph Guarnaccia</u>			
<i>Note: The applicant must be the owner of the property or easement which is the subject of this application or must be the government agency or entity with power of condemnation over such property or easement.</i>			
• Mailing Address of Applicant: <u>Oak Ridge Parkway, PO Box 71</u>			
<u>Toms River</u>	<u>NJ</u>	<u>08754</u>	<u>P.O. Box 732-914-2516</u>
City/Town	State	Zip Code	Telephone No.
• Location of Property subject to this Application:			
<u>Cranston</u>	<u>Mill Street</u>	<u>167 & 180 Mill Street</u>	
City/Town	Street Abutting Site	Street address number (if applicable)	
Nearest street intersection and its distance and direction from site <u>Astle Street, 40 ft, west</u>			
Nearest utility pole number(s): <u>NECO 9017</u> Direction to site from abutting street: N___ S___ E___ W <input checked="" type="checkbox"/>			
Tax Assessor's Plat(s) and Lot No.(s): <u>Plat 4, lots 1102, 2563, & 2682</u>			
Recorded Plat (s) and Lots No.(s) (if no Tax Assessor Plat and Lots available): _____			

PART C	General Information:
• Any previous application for this site? Yes___ No <input checked="" type="checkbox"/> Provide Application No.(s) _____	
• Any previous enforcement action for this site? Yes___ No <input checked="" type="checkbox"/> Provide File No(s) _____	
• Amount of wetland area to be altered, if any:	
<u>Palustrine wetland 2+/-</u> square feet	
<u>Riverbank or perimeter wetland 200+/- (fence)</u> square feet	
<u>Watercourse): zero</u> linear feet	
<input type="checkbox"/> Check here if any floodplain alteration is proposed	
• Fee category per Rule 7.11 (example 7.11(D)(6) 2- lots sub. Pre-Det. - \$900) <u>7.11(D)(3) Limited Project PD \$300</u> Check No. _____	
<input type="checkbox"/> Check here if the project has a Certificate of Critical Economic Concern (CEC) and attach copy of certification.	

PART D	For Application Renewal (if applicable):
• Name of Original or Subsequent Permittee: _____	
• Application/Permit No. _____ Permit Expiration Date: _____	
• Number of previous renewals issued (if applicable): _____	
• Statement of Applicant: I hereby state that I am requesting renewal of the original or subsequently modified permitted project under Application/Permit No. _____. I fully understand the permit limitations and will comply with any and all conditions of the permit.	
• Applicant's name:(print) _____ (signature) _____	
<input type="checkbox"/> Check here if actual site work has commenced on the project for which renewal is requested.	

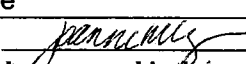
PART E For Application For Permit Transfer (if applicable):

- Name of Original Permittee: _____
- Application/Permit No. _____ Permit Expiration Date: _____
Note: A certified copy of the deed of transfer must be enclosed with application.
- Statement of Applicant:** I hereby certify that I have reviewed the permit letter issued under Application/Permit No. _____ and hereby agree to comply with all conditions of the permit, including any time limitations imposed.
- Applicant's name:(print) _____ (signature) _____ Date: _____

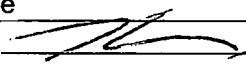
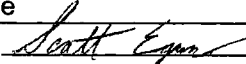
PART F For Change in Owner During Application Processing (if applicable):

- Name of Original Applicant: _____ Application No. _____
Note: A certified copy of the deed of transfer must be enclosed for Applications to Alter only.

PART G Certification of Professional(s) (if applicable): *Note: Any professional (e.g. engineer, biologist, landscape architect, etc.) who participated in the submission and/or preparation of this Application and supporting documentation must sign below.*

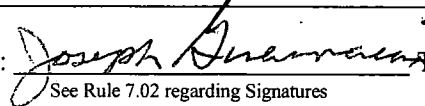
- I hereby certify that I have been authorized by the applicant to prepare documentation to be submitted in support of this Application; that such documentation is in accordance with the *Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act*; and that such documentation is true, accurate and complete to the best of my knowledge.
- Name of professional (print): Joanne M. Lynch Title: Project Manager
Address: 250 Apollo Drive d/b/a: AECOM
Signature of professional:  Date: 5/2/12 Tel: 978.905.2960
- ☒ Check this box if the above named is the project manager or project lead for the applicant.

If more than one professional:

- Name of professional (print): Thomas J. Keough Title: Environmental Scientist
Address: 250 Apollo Drive d/b/a: AECOM
Signature of professional:  Date: 5/2/11 Tel: 978 905 2270
- Name of professional (print): Robert S. Egan Title: Certified Soil Scientist
Address: 250 Apollo Drive d/b/a: AECOM
Signature of professional:  Date: 5-2-12 Tel: 978-905-2192
- Name of professional (print): _____ Title: _____
Address: _____ d/b/a: _____
Signature of professional: _____ Date: _____ Tel: _____

PART H Certification/Authorization of Applicant:

- I hereby certify that I have requested and authorized the investigation, compilation, and submission of all the information, in whatever form, contained in this Application; that I have personally examined and am familiar with the information submitted herein; and that such information is true, accurate and complete to the best of my knowledge. I hereby authorize RIDEM personnel access to the property for purposes of observing conditions pertinent to this application and assessing compliance with any permit or determination resulting from this application, including any sampling, monitoring or surveying that may be deemed appropriate, consistent with the RIDEM Administrative Inspection Guidelines. (See DEM website - Office of Compliance and Inspection for copy). Note any special concerns for access here: _____

Signature of Applicant:  Title (if applicable): _____
See Rule 7.02 regarding Signatures

Print Name Signed Above: Joseph Guarnaccia Date: 4/19/12

Project Narrative

1.0 Introduction

On behalf of BASF Corporation (BASF), AECOM Inc. (AECOM) is herein submitting this Request for Preliminary Determination for the proposed installation of a perimeter fence (to include the cutting of vegetation), demolition of existing structures, and debris removal at several former manufacturing facilities located at 0 and 180 Mill Street in Cranston, Rhode Island.

Although a majority of the proposed activities are to be located upland of the 50-foot *Perimeter Wetland* adjacent to Bellefont Pond and outside of the 200-foot *Riverbank* on the 180 Mill Street property (Cranston Plant site), there will be temporary impacts to Freshwater Wetlands at the project sites. These impacts are associated with the removal of an old fire intake structure located along the bank of Bellefont pond, the removal of an existing concrete structure and debris partially located within the 50-foot *Perimeter Wetland*, and the installation of a single fence post that is to be driven into the bottom of Bellefont Pond.

1.1 Project Background and Overview

The 167 Mill Street (a/k/a 0 Mill Street according to the Cranston Assessor's office) Property (Bellefont site) was formerly occupied by the Atlantic Tubing and Rubber Company and contained two manufacturing facilities; a facility used for the manufacture of floor tiles was located on the northern portion of the site, while a facility used for polyvinyl chloride resin manufacturing was located on the southern portion.

According to information provided by the Cranston Fire Department, the polyvinyl chloride resin manufacturing plant exploded on April 13, 1968 when vinyl chloride escaped from a reactor and ignited. Atlantic Tubing and Rubber Company sold the entire site to the Ciba Geigy Corporation in 1978. Ciba Geigy (now BASF) subsequently razed the buildings and removed the storage tanks, reactors and other portions of the former facilities infrastructure.

Remedial activities are currently being conducted on site in accordance with a Consent Agreement between Ciba-Geigy (BASF) and the United States Environmental Protection Agency (EPA), dated, June 1989.

Beginning in 1930, the Alrose Chemical Company manufactured chemicals at the 180 Mill Street property (Cranston Plant site). The GEIGY Chemical Company purchased the site in 1954 and merged with the Ciba Corporation in 1970. Throughout its operational history, the site was used for the manufacture of various agricultural products, leather and textile auxiliaries, plastics additives, optical brighteners, pharmaceuticals, and bacteriostats. The facility operated until May 1986, when at that time Ciba ceased chemical manufacturing operations at the site and began decommissioning and razing the existing plant. The production plant was demolished in the late 1980's, and there are currently four buildings that remain on the property (Buildings #15, #20, #25 and #26) which are located north of the railroad spur and upgradient from the former Production Area.

An Administrative Consent Order (AOC) was entered into with the Environmental Protection Agency (EPA) in June of 1989 (RCRA Docket No: I-88-1088), and was subsequently modified during September of 1992. The AOC identified the steps that were to be taken to evaluate the nature and extent of any releases of hazardous waste or hazardous constituents at or from the facility, and to take the necessary steps to develop a Corrective Measures Study (CMS).

2.0 Existing Conditions

The subject properties are located on Mill Street in Cranston, Rhode Island (Site). The Bellefont site consists of Bellefont Pond and open land upon which several industrial buildings were formerly located (Figure 1, Appendix A). According to the City of Cranston Tax Assessor's office the site comprises three contiguous parcels (Plat 4, Lots 183, 2563, and 2682) and encompasses approximately 23.82 acres. The site is bisected by a railroad spur, which separates lots 2563 and 2682. The site formerly functioned as a rubber tubing and floor tile manufacturing facility north of the railroad spur, and a polyvinyl chloride (PVC) manufacturing plant south of the railroad spur, the structures of which were all demolished after the Ciba Geigy Corporation acquired the land in 1978.

The Cranston Plant site was the former Ciba-Geigy production facility, and consists of several unoccupied buildings and open land upon which chemical production buildings were located adjacent to the Pawtuxet River (Figure 1, Appendix A). According to the City of Cranston Tax Assessor's office, the site comprises three contiguous parcels (Plat 4, Lots 1102, 2630 and 1108) and encompasses approximately 6.04 acres. The site is bisected by a railroad spur, and the area north of the railroad spur is developed with several existing buildings (Buildings #15, #20, #25 and #26), while the area south of the railroad spur is where the actual production activities took place when the facility was in operation.

2.1 Land

The Bellefont site has frontage on Mill Street along its eastern boundary, and is bound by residential properties to the north and east, Bellefont Pond to the west, and commercial development to the south and southeast (Figure 1, Appendix A). As previously mentioned, the manufacturing facilities located on the site were demolished, and current site conditions are significantly disturbed. This upland area includes several above ground concrete structures, building foundations, partially paved areas, debris piles, and is overgrown with numerous plant species typical of disturbed sites including Poison ivy (*Toxicodendron radicans*), Eurasian bittersweet (*Celastrus orbiculatus*), multiflora rose (*Rosa multiflora*), Japanese knotweed (*Polygonum cuspidatum*) and glossy buckthorn (*Rhamnus frangula*).

The Cranston Plant site has frontage on Mill Street along its western boundary, and is bound by residential properties to the north and east. The southern and southeastern boundary of the property, which consists of a man-made steel and concrete bulkhead structure with a chain-link fence located along the top of the bulkhead, borders the Pawtuxet River. As previously mentioned, the southern portion of the site was occupied by the production facility prior to its demolition in the 1980's. This upland area includes partially paved areas, building foundations, a dirt access road through part of the site, as well as pump house structures, wellheads and pipelines associated with ongoing remedial activities. Upland vegetation noted onsite is typical to that of disturbed areas. Vegetation in the tree and sapling / shrub stratum included northern catalpa (*Catalpa speciosa*), eastern cottonwood (*Populus deltoides*), hawthorne (*Crataegus*, spp.), staghorn sumac (*Rhus typhina*), tree of heaven (*Ailanthus altissima*) and white pine (*Pinus strobes*). Herbaceous vegetation included goldenrod (*Solidago* spp.), Japanese knotweed (*Polygonum cuspidatum*), various grasses, vetch (*vicia*, spp.), purslain (*Portulaca*, spp.) and common mullein (*Verbascum thapsus*). Poison ivy (*Toxicodendron radicans*) and Eurasian bittersweet (*Celastrus orbiculatus*) vines were also noted at the site, predominantly along the fence line.

2.2 Freshwater Wetlands

Site investigations were conducted on March 21, 2012 and wetland delineations were performed in accordance with the US Army Corps of Engineers' (USACE) Interim Regional Supplement to the Corps of

then drains beneath a small access road through three approximately 25-foot long, large diameter, steel culverts into Wetland 1.

Wetland 1 (flags 1-1 through 1-5) demarcates the upper limits of a drainage channel approximately 1300-linear feet in length. The channel flows around the edges of paved parking lots to the east and eventually discharges into the Pawtuxet River.

2. Silt fence will be deployed as depicted on the Permit Site Plan located in Appendix C; the silt fence is intended to be deployed whenever the soil is disturbed to prevent erosion (i.e., 50 feet away from the pond edge).
3. Vegetated portions of the site located landward of the 50-foot *Perimeter Wetland* will be cleared and chipped (no roots removed, trees and overgrowth removed to ground level, with minimal soil disturbance) of all vegetation less than eight inches in diameter. All chipped material will be left in place (no piles).
4. All existing concrete pads will be cleared of vegetation. No soil is to be removed during this process and a stump grinder will be used in these areas. In particular cases of large vegetation where it's impossible not to remove soil, all disturbed soil will be stockpiled for future testing and removal.

Building Demolition

1. The remnants of the existing structures located on the Bellefont site will be removed and disposed of as described below:
2. The concrete walls (one L-shaped, one square) will be removed to ground level with the slab left in place, and then reduced to four inch minus with rebar removed.
3. New certified clean fill will be used to slope the concrete wall area for safety purposes (four to one slope) where necessary.
4. All concrete pilings/tank supports will be removed to ground level and reduced to four inch minus with rebar removed.
5. The concrete building (old pump house) will be removed to ground level and reduced to four inch minus with rebar removal. Ground level slab will be left in place.

Debris Removal and General Maintenance Activities

1. Debris is located throughout the site and will be stockpiled and removed as described below;
2. All granite blocks will be collected and stockpiled in one area near the gate.
3. All metal debris will be collected and removed.
4. All R/R ties will be collected and stockpiled in one area near the gate.
5. All rebar and concrete will be removed from site.
6. To prevent access, the concrete storm drain holes will be covered with 3/8" steel plate and welded to prevent removal.
7. The pump station feed lines will be covered or filled with new (clean certified) fill.
8. All old fencing will be removed from the site.

Area #3 (Lot 1102)**Fence Repairs**

1. Various portions of the Site perimeter fence will be repaired as needed, and the gates located on Mill Street (by Safety-Kleen) and the gate on the railroad bridge will also be repaired. The fence located below the railroad bridge will also be repaired.

Vegetation Removal

1. The area will be cleared and chipped (no roots removed, trees and overgrowth removed to ground level, with minimal soil disturbance) of all vegetation less than eight inches dbh.
2. All chipped material shall be left in place (no piles) similar to the power company ROW clearing project; the intent is to utilize this chipped material for stabilizing the surface of all disturbed/cleared soils.
3. Silt fence will be deployed as specified on the Permit Site Plan located in Appendix C. The silt fence is intended to be deployed whenever the soil is disturbed to prevent erosion; the silt fence is to extend along the upper bank of the River.
4. All existing concrete pads will be cleared of vegetation. Soil must not be removed; these areas must use a stump grinder. In cases of large vegetation where it's impossible not to remove soil, any soil will be stockpiled for future testing and removal. This stockpile shall be secured with hay bales to insure containment.

installation of a physical barrier will eliminate trespasser risks. The following scenarios were examined, in accordance with Rule 9.02 (d).

No Action

A “no action” scenario would not meet the project purpose, due to holes, gaps and other deficiencies in the current fence alignment. Allowing the structures to remain on the Bellefont site would provide a continued attraction for trespassers and would not achieve the project goal. A no-construction option, such as employing a security guard, would be impractical and prohibitively expensive. Security guards could not prohibit entry to the 23.82 acre Bellefont site nearly as effectively as an installed fence.

Repairs or In Situ Replacement of Existing Fence

The existing fence located within the interior of the Bellefont lot has been damaged or removed for long stretches and it is not feasible to attempt to repair the fence. Additionally, repairing or replacing the fence line in its current location would still require work in freshwater wetlands (within the 50-foot *Perimeter Wetlands* and the 100-foot *Riverbank*). Due to the configuration of Bellefont Pond on the subject property it is not possible to relocate the fence to a position where it could be located outside of the 50-foot *Perimeter Wetland* and still physically prevent trespassers from entering the Site. The structures and debris that are to be removed are currently located within the 50-foot *Perimeter Wetland* and therefore it is not possible to accomplish the removal of these items without creating a temporary disturbance within the resource area.

Action on Other Applicant-Owned Lands

The applicant owns no other property in the Site vicinity that could be used to meet the project purpose. Thus, no other portion of the Site or other properties owned by the applicant could be used to achieve the project purpose.

New Fence Installation and Structure/Debris Removal – Proposed Action

To satisfy the project need of minimizing risk to human receptors, a fence will need to be installed within the 50-foot *Perimeter Wetland* and one fence post installed in a freshwater wetland onsite, to prevent unauthorized access onto the property. A “no action” alternative would not meet the project purpose, due to the deficiencies in the condition of the existing fence. Ultimately, a fence is required to prevent trespassers from accessing the Site, as no other measures, such as security guards or other physical barriers, are reasonably available to meet the project purpose. Repairing or replacing the existing fence would not meet the project purpose of preventing unauthorized access to all portions of the Site. Additionally, repairing or replacing the existing fence would still result in impacts to onsite freshwater wetlands. The fence installation, as currently proposed, represents the least environmentally damaging practicable alternative, as it meets the project purpose and it will not have unnecessary environmental impacts.

As demonstrated below in Section 4.4.2, the project has been designed to minimize potential impacts to freshwater wetlands to the maximum extent practicable and to avoid and minimize impacts the wetland functions and values within the proposed wetland work areas. To the best of the applicant's knowledge, no zoning, infrastructure, or parcel size constraints need to be addressed in order to avoid potential alterations to freshwater wetlands.

4.4.2 Project Minimization

Measures have been taken to avoid impacts to freshwater wetlands to the maximum extent practical. Information regarding the proposed minimization measures, for wetland impacts that are otherwise unavoidable, is presented below. The proposed scale of the project has been minimized to the maximum

Project Timing

It is anticipated that the entire fence installation and structure/debris removal project will require approximately four to six weeks to complete. The proposed project activities are scheduled to be conducted under seasonally dry conditions, and will likely commence in summer 2012, pending receipt of all appropriate approvals. This proposed project timing will further minimize any impacts to wetlands, as work will be conducted in dry conditions.

Animal Passage

In accordance with Rule 9.02 (D) (3), measures have been taken to minimize impacts to fish and wildlife passage. With the exception of a single fence post, no work or fencing is proposed within the areas of open water on the project sites, and thus no restrictions to fish passage will occur with the proposed project.

To the best of the applicant's knowledge, no rare species or rare wetland types are present onsite. Review of the current Rhode Island Geographic Information System mapping and U.S. Fish and Wildlife Service website indicates that no rare species are known to inhabit the project sites.

Floodplain Considerations

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for the City of Cranston (Community Panel No. 44007C0318G, Panel 318, 2009) the project site is not located within the 100-year floodplain. No displacement of floodwaters onto adjacent properties is anticipated in association with the proposed project.

Erosion Control Considerations

Sedimentation and erosion control devices are proposed along the upland edge of the 50-foot *Perimeter Wetland* and in the vicinity of structure/debris removal areas. No siltation fencing or haybale installation is currently proposed in association with the fence installation, as the installation of sedimentation and erosion controls would likely result in larger temporary impacts at the Site. If DEM deems installation of additional devices necessary to demarcate work areas, to minimize potential erosion and sedimentation, or to otherwise stabilize the site, the applicant would be pleased to install haybales, siltation fencing or other appropriate technologies to comply with such a condition.

No increase in localized or off-Site runoff is anticipated in association with the project. Additionally, no piping or permanent landscaping changes are proposed, and thus no significant associated alterations of sheet-flow at the Site are anticipated.

Additional Minimization Considerations

No pollutants, fertilizers, pesticides or any other chemical or organic application that would increase the pollutant or nutrient loading at the Site are proposed. No septic systems or water withdrawal are proposed as part of this project. No significant diversions of groundwater or surface water are proposed as part of this project.

4.5 Rule 9.02 (E) - Engineering Requirements

Due to the fact that the fence installation and structure/debris removal will result in no significant changes to drainage characteristics, no significant loss of flood storage, no long-term alteration of ground-water or surface-water and the fact that no water withdrawals are proposed, no calculations, documents or associated report stamped by a Registered Professional Engineer is included herein.

5.0 Summary

As based upon the rationale presented herein, it is the applicant's opinion that the proposed work will not result in a net increase of fill in the wetland, nor will it result in a permanent change of the wetland's hydrological, biological or chemical characteristics or reduce habitat functions, and, as such, the proposed activities constitute an *insignificant alteration* of freshwater wetlands.

It is the applicant's opinion that the proposed project is adequately limited in scope and size to result in no significant change to the characteristics, functions or values of the freshwater wetlands onsite and that the proposed action is not random, unnecessary or undesirable. Additionally, no rare species or rare wetland type alterations are anticipated, and no losses of flood storage capacity are anticipated.

Appendix A

Figures

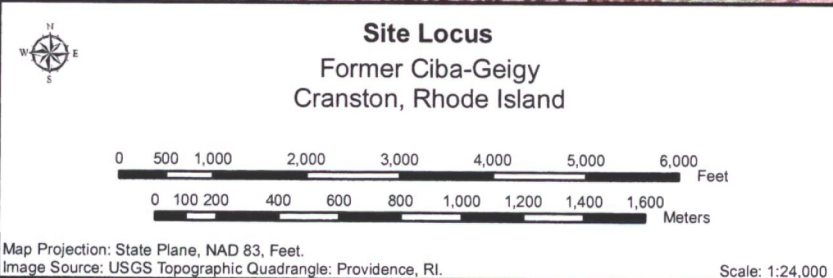


Figure 1

Date: April 2012

Project #: 60163799.7

J:\Incl. Service\Project Files\BASF-0760\Cranston RI\7 Deliverables\1. GIS Database\Projects\Figure 2. Aerial Photograph.mxd



AECOM

FORMER CIBA-GEIGY FACILITY AND
BELLEFONT POND PROPERTY

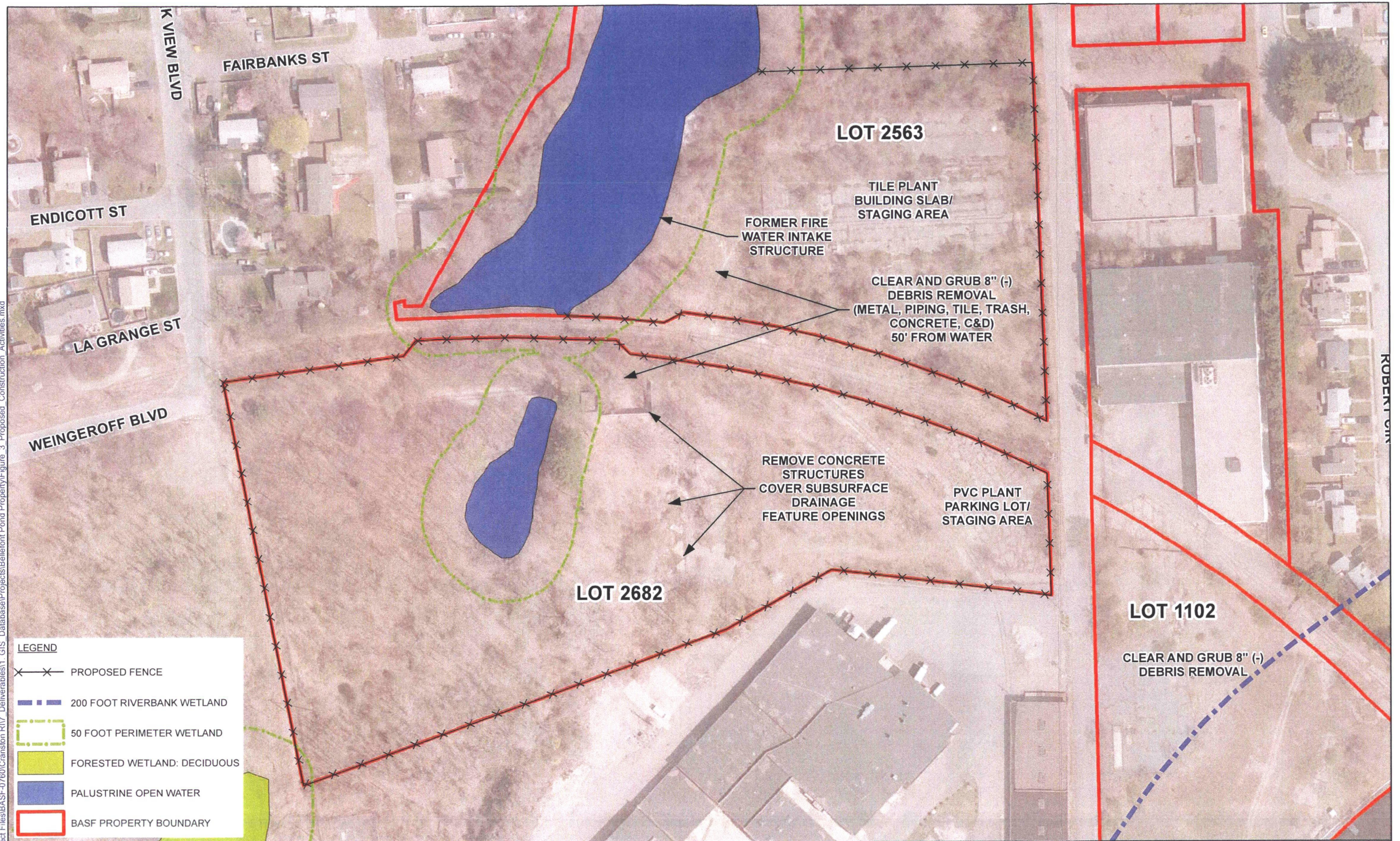
PROJECT NUMBER

FIGURE 2
AERIAL PHOTOGRAPH

DATE: 04/19/12

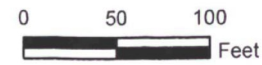
DRWN: J.E.B.

J:\Indl_Service\Project_Files\BASF-0760\Cransford Riv7_Deliverables\1_GIS_Database\Projects\Bellefont Pond Property\Figure 3_Proposed Construction Activities.mxd



LEGEND

- PROPOSED FENCE
- 200 FOOT RIVERBANK WETLAND
- 50 FOOT PERIMETER WETLAND
- FORESTED WETLAND: DECIDUOUS
- PALUSTRINE OPEN WATER
- BASF PROPERTY BOUNDARY



FORMER CIBA-GEIGY FACILITY AND BELLEFONT POND PROPERTY
60163799.7
DATE: 05/02/12 DRWN: J.E.B.

FIGURE 3
BELLEFONT PROPERTY SUMMARY
PROPOSED CONSTRUCTION ACTIVITIES

Appendix B

Site Photographs

PHOTOGRAPHIC LOG


Client Name: BASF		Site Location: Cranston, Rhode Island	Project No. 60163799
Photo No. 1	Date:		
Direction Photo Taken: Facing West			
Description: View of Bellefont Pond and pond bank on lot 2563. The northern extent of the proposed fence is to be located in this approximate location.			

Photo No. 2	Date:	
Direction Photo Taken: Facing North		
Description: View of Bellefont Pond from the Rail Road tracks. The southern extent of the proposed fence on lot 2682 is to be located in this approximate location.		

PHOTOGRAPHIC LOG



Client Name: BASF		Site Location: Cranston, Rhode Island	Project No. 60163799
Photo No. 3	Date:		
Direction Photo Taken: Facing West			
Description: View of fire water intake structure that is to be removed.			

Photo No. 4	Date:	
Direction Photo Taken: Facing Southwest		
Description: View of tile plant footprint located on lot 2563 that is to be cleared of vegetation. Vegetation removal is to occur landward of the 50-foot Perimeter Wetland.		

PHOTOGRAPHIC LOG


Client Name: BASF		Site Location: Cranston, Rhode Island	Project No. 60163799
Photo No. 5	Date:		
Direction Photo Taken: Facing West			
Description: View of debris located on foundation of former tile plant on lot 2563. Debris is to be stockpiled and removed from the site.			

Photo No. 6	Date:	
Direction Photo Taken: Facing west		
Description: View of typical debris found on lot 2563.		

PHOTOGRAPHIC LOG


Client Name: BASF		Site Location: Cranston, Rhode Island	Project No. 60163799
Photo No. 7	Date:		
Direction Photo Taken: Facing North			
Description: View of remaining foundation located on lot 2682 that is to be removed.			

Photo No. 8	Date:	
Direction Photo Taken: Facing North		
Description: View of remaining wall located on lot 2682 that is to be removed.		

PHOTOGRAPHIC LOG


Client Name: BASF		Site Location: Cranston, Rhode Island	Project No. 60163799
Photo No. 9	Date:		
Direction Photo Taken: Facing Southwest			
Description: View of former pump house located on lot 2682 that is to be removed			

Photo No. 10	Date:	
Direction Photo Taken: Facing East		
Description: View of remnant concrete structures and debris located on lot 2682 that are to be removed		

PHOTOGRAPHIC LOG


Client Name:		Site Location:	Project No.
Photo No. 11	Date:		
Direction Photo Taken: Facing Northwest			
Description: View of remnant foundation and debris located on lot 2682 that is to be removed			

Photo No. 12	Date:	
Direction Photo Taken: Facing south		
Description: Typical view of dilapidated fence separating lot 2682 and the Rail road line, as well as debris that is to be removed.		

PHOTOGRAPHIC LOG


Client Name:		Site Location:	Project No.
Photo No. 13	Date:		
Direction Photo Taken: Facing south			
Description: View of fence (missing sections) on lot 2563			

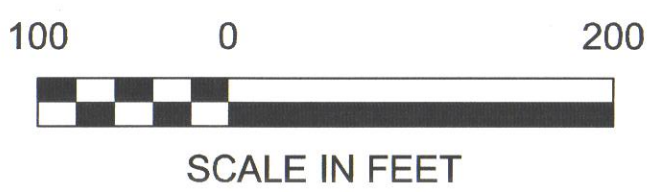
Photo No. 14	Date:	
Direction Photo Taken: Facing West		
Description: View of fence (less than three feet in height) that borders lot 2563 along Mill Street		

Appendix C

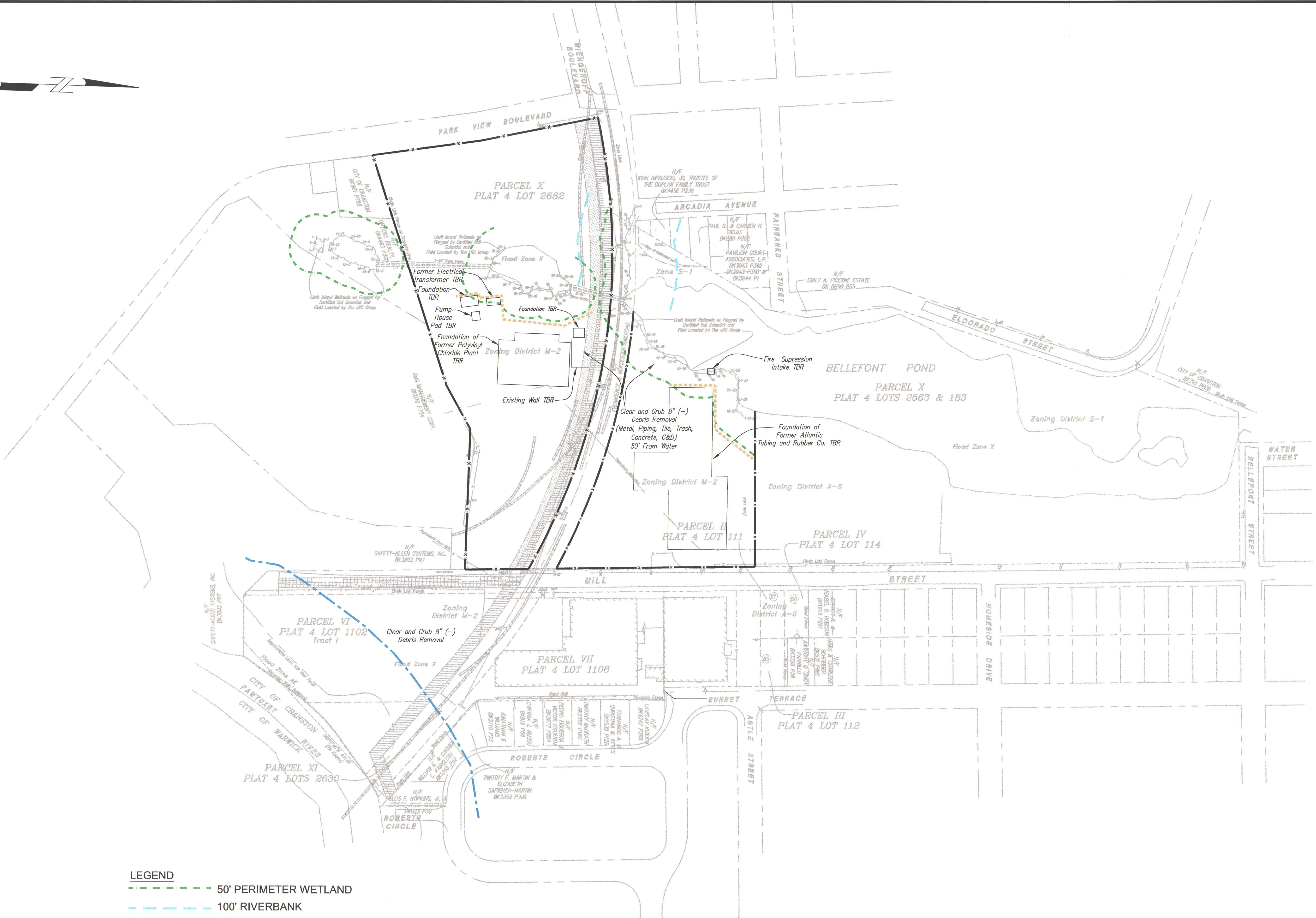
Permit Site Plan



- LEGEND**
- 50' PERIMETER WETLAND
 - 100' RIVERBANK
 - 200' RIVERBANK
 - EROSION CONTROL
 - PROPOSED FENCE
 - TBR TO BE REMOVED



FORMER CIBA-GEIGY FACILITY AND BELLEFONT POND PROPERTY 60163799.7		PERMIT SITE PLAN	
DATE: 05/02/12	DRWN: J.E.B.		SHEET 1



Appendix D

Wetland Edge Delineation Data Forms

Applicant: BASF
Project: Mill Street Fence Installation
City/Town: Cranston, RI

Wetland No. 1A
Flag No. Sequence: 1A-1 through 1A-12
Date: March 21, 2012

Wetland Edge Delineation Data Form (UPLAND)

Vegetation: List the three dominant species in each vegetative strata along with their NWI status:

Tree Status	Indicator	Herbs Status	Indicator
1. Betula populifolia	FAC	1. Polygonum cuspidata	UPL
2. Populus grandidentata	FACU	2.	
3.		3.	

Saplings/Shrubs		Woody Vines
1. Rosa multiflora	FACU	1. Celastrus orbiculatus
2.		2.
3.		3.

List other vegetative species noted which may have affected determination of the wetland edge:

Soil: SCS Soil Survey Mapping Unit: Sudbury Sandy Loam – but field conditions indicate Udorthents/Urban Land.

On Hydric Soils List? (Y/N) NO

Horizon	Depth	Matrix Color	Mottling Description	Depth to Saturation	Depth to Free Water

Soil Profile (Note wetland flag no. nearest soil test pit): 1A-9

Other indicators exhibiting an absence of wetland hydrology (e.g. absence of water marks, lack of redoximorphic features, lack of oxidized rhizospheres, etc.):

Landscape position: Altered/atypical situation? (describe): Area is historically disturbed, and consists of compacted fill material with abrupt, steeply sloping fill down to open water. Little or no vegetated wetland observed bordering on open water areas.

Comments: No soil samples taken due to disturbed nature of site and potential for encountering impacted soils.

Applicant: BASF

Project: Mill Street Fence Installation

City/Town: Cranston, RI

Wetland No. 1A

Flag No. Sequence: 1A-1 through 1A-12

Date: March 21, 2012

Wetland Edge Delineation Data Form (WETLAND)**Vegetation:** List the three dominant species in each vegetative strata along with their NWI status:

Tree Status	Indicator	Herbs Status	Indicator
1. <i>Acer rubrum</i>	FAC	1.	
2.		2.	
3.		3.	

Saplings/Shrubs		Woody Vines	
1. <i>Rhamnus frangula</i>	FAC	1. <i>Celastrus orbiculatus</i>	
2.		2.	
3.		3.	

List other vegetative species noted which may have affected determination of the wetland edge:

Soil: SCS Soil Survey Mapping Unit: Water

Horizon	Depth	Matrix Color	Mottling Description	Depth to Saturation	Depth to Free Water

On Hydric Soils List? (Y/N) No

Soil Profile (Note wetland flag no. nearest soil test pit): 1A-9**Other hydrological indicators** (e.g. water marks, drainage patterns, root rhizospheres, etc.; see Appendix 4(A)(4) of the Rules):

Landscape position: Altered/atypical situation? (describe): Area is historically disturbed, and consists of compacted fill material with abrupt, steeply sloping fill down to open water. Little or no vegetated wetland observed bordering on open water areas.

Comments: No soil samples taken due to disturbed nature of site and potential for encountering impacted soils.

Applicant: BASF
Project: Mill Street Fence Installation
City/Town: Cranston, RI

Wetland No. 1B
Flag No. Sequence: 1B-1 through 1B-20
Date: March 21, 2012

Wetland Edge Delineation Data Form (UPLAND)

Vegetation: List the three dominant species in each vegetative strata along with their NWI status:

Tree Status	Indicator	Herbs Status	Indicator
1. Pinus strobus	FACU	1. Polygonum cuspidata	UPL
2.		2.	
3.		3.	

Saplings/Shrubs		Woody Vines	
1. Rosa multiflora	FACU	1. Celastrus orbiculatus	
2. Rhamnus frangula	FAC	2. Smilax rotundifolia	FAC
3.		3.	

List other vegetative species noted which may have affected determination of the wetland edge:

Soil: SCS Soil Survey Mapping Unit: Sudbury Sandy Loam – but field conditions indicate Udorthents/Urban Land.

On Hydric Soils List? (Y/N) NO

Horizon	Depth	Matrix Color	Mottling Description	Depth to Saturation	Depth to Free Water

Soil Profile (Note wetland flag no. nearest soil test pit): 1B-2

Other indicators exhibiting an absence of wetland hydrology (e.g. absence of water marks, lack of redoximorphic features, lack of oxidized rhizospheres, etc.):

Landscape position: Altered/atypical situation? (describe): Area is historically disturbed, and consists of compacted fill material with abrupt, steeply sloping fill down to open water. Little or no vegetated wetland observed bordering on open water areas.

Comments: No soil samples taken due to disturbed nature of site and potential for encountering impacted soils.

Applicant: BASF
Project: Mill Street Fence Installation
City/Town: Cranston, RI

Wetland No. 1B
Flag No. Sequence: 1B-1 through 1B-20
Date: March 21, 2012

Wetland Edge Delineation Data Form (WETLAND)

Vegetation: List the three dominant species in each vegetative strata along with their NWI status:

<u>Tree Status</u>	<u>Indicator</u>	<u>Herbs Status</u>	<u>Indicator</u>
1. Acer rubrum	FAC	1.	
2.		2.	
3.		3.	

<u>Saplings/Shrubs</u>		<u>Woody Vines</u>	
1. Rhamnus frangula	FAC	1. Celastrus orbiculatus	
2. Decodon verticillatus	OBL	2. Toxicodendron radicans	FAC
3.		3.	

List other vegetative species noted which may have affected determination of the wetland edge:

Soil: SCS Soil Survey Mapping Unit: Water

<u>Horizon</u>	<u>Depth</u>	<u>Matrix Color</u>	<u>Mottling Description</u>	<u>Depth to Saturation</u>	<u>Depth to Free Water</u>

On Hydric Soils List? (Y/N) No

Soil Profile (Note wetland flag no. nearest soil test pit): 1B-2

Other hydrological indicators (e.g. water marks, drainage patterns, root rhizospheres, etc.; see Appendix 4(A)(4) of the Rules):

Landscape position: Altered/atypical situation? (describe): Area is historically disturbed, and consists of compacted fill material with abrupt, steeply sloping fill down to open water. Little or no vegetated wetland observed bordering on open water areas.

Comments: No soil samples taken due to disturbed nature of site and potential for encountering impacted soils.

Applicant: BASF
Project: Mill Street Fence Installation
City/Town: Cranston, RI

Wetland No. 1C
Flag No. Sequence: 1C-1 through 1C-28
Date: March 21, 2012

Wetland Edge Delineation Data Form (UPLAND)

Vegetation: List the three dominant species in each vegetative strata along with their NWI status:

Tree Status	Indicator	Herbs Status	Indicator
1. Acer rubrum	FAC	1.	
2.		2.	
3.		3.	

Saplings/Shrubs		Woody Vines	
1. Lonicera japonica	FACU	1. Celastrus orbiculatus	
2. Rhamnus frangula	FAC	2. Vitis vulpina	FAC
3.		3.	

List other vegetative species noted which may have affected determination of the wetland edge:

Soil: SCS Soil Survey Mapping Unit: Sudbury Sandy Loam – but field conditions indicate Udorthents/Urban Land.

On Hydric Soils List? (Y/N) NO

Soil Profile (Note wetland flag no. nearest soil test pit): 1C-17

Horizon	Depth	Matrix Color	Mottling Description	Depth to Saturation	Depth to Free Water

Other indicators exhibiting an absence of wetland hydrology (e.g. absence of water marks, lack of redoximorphic features, lack of oxidized rhizospheres, etc.):

Landscape position: Altered/atypical situation? (describe): Area is historically disturbed, and consists of compacted fill material with abrupt, steeply sloping fill down to open water. Little or no vegetated wetland observed bordering on open water areas.

Comments: No soil samples taken due to disturbed nature of site and potential for encountering impacted soils.

Applicant: BASF
Project: Mill Street Fence Installation
City/Town: Cranston, RI

Wetland No. 1C
Flag No. Sequence: 1C-1 through 1C-28
Date: March 21, 2012

Wetland Edge Delineation Data Form (WETLAND)

Vegetation: List the three dominant species in each vegetative strata along with their NWI status:

<u>Tree Status</u>	<u>Indicator</u>	<u>Herbs Status</u>	<u>Indicator</u>
1. Acer rubrum	FAC	1.	
2.		2.	
3.		3.	

<u>Saplings/Shrubs</u>		<u>Woody Vines</u>	
1. Rhamnus frangula	FAC	1. Celastrus orbiculatus	
2. Cornus amomum	FACW	2. Toxicodendron radicans	FAC
3.		3.	

List other vegetative species noted which may have affected determination of the wetland edge:

Soil: SCS Soil Survey Mapping Unit: Water

Horizon	Depth	Matrix Color	Mottling Description	Depth to Saturation	Depth to Free Water

On Hydric Soils List? (Y/N) No

Soil Profile (Note wetland flag no. nearest soil test pit): 1C-17

Other hydrological indicators (e.g. water marks, drainage patterns, root rhizospheres, etc.; see Appendix 4(A)(4) of the Rules):

Landscape position: Altered/atypical situation? (describe): Area is historically disturbed, and consists of compacted fill material with abrupt, steeply sloping fill down to open water. Little or no vegetated wetland observed bordering on open water areas.

Comments: No soil samples taken due to disturbed nature of site and potential for encountering impacted soils.